JPRS 78023

7 May 1981

USSR Report

TRANSPORTATION

No. 44

FBIS FOREIGN BROADCAST INFORMATION SERVICE

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BRIEFS

TECHNICAL CONFERENCE IN YUZHNO-SAKHALINSK--A flight and technical conference was held in Yuzhno-Sakhalinsk to exchange expertise and experience in flying the AN-24. The AN-24 has been used on the island for approximately 10 years. Performance results indicate that it is the best plane in fulfilling transportation work. Apart from being used for transportation, it is also used in fire-fighting operations. In the future, this aircraft will replace the IL-14 on the 200-mile economic zonal flight involving fish and ice conditions reconnaissance work. [SK071047 Yuzhno-Sakhalinsk Domestic Service in Russian 1940 GMT 6 Apr 81]

CSO: 1829/246

MOTOR VEHICLES

BRIEFS

FINNISH PRESS ON TRUCK -- The Valmet company has received its largest-ever export order for trucks--81 units for delivery to the Soviet Union. The value of the order is 83 million markkas. According to the director of the Valmet transport vehicle factory, Pekka Heikkila, it was the good experience with earlier Finnish machines which decided the affair to Finland's advantage. The agreement concerns middle-weight trucks with carrying capacities of from 10 to 25 tons. In the agreement is also included deliveries of a considerable amount of equipment for handling of special cargo. The trucks will be delivered to the Soviet Maritime and Forestry ministeries for handling of containers in harbors, container terminals and on roll-on, roll-off ships. The orders will further strengthen the already good employment situation at the Valmet factory in Tampere. The factory employs 1,300 persons, and the value of the coming year's deliveries is estimated at 250 million markkas. [Text] [Helsinki HUFVUDSTADSBLADET in Swedish 4 Apr 81 p 13]

CSO: 3109/158

RECOMMENDATIONS FOR IMPROVED COORDINATION AT IL'ICHEVSK

Moscow GUDOK in Russian 5 Mar 81 p 2

[Article by Ye. Krushkin, deputy chief of the maritime port and A. Kukava, stationmaster, Il'ichevsk: "Improve Coordination at Junctions"]

[Excerpt] The transport workers at Il'ichevsk are striving under difficult conditions to provide handling of a constantly growing flow of cargo with minimum costs. They are strengthening the coordination and business ties with the enterprises which are exporters and users of imported goods. Control of the transport conveyor is being improved at the junction. And still "shortcomings" in coordination arise at the juncture of sea, rail and truck routes: there is freight, but no freight cars; there are cars, but no freight. Sometimes there is not enough tonnage by sea, and sometimes not enough storage space. All of this revolves around idle time for ships and rolling stock and the increase in transport costs.

In our opinion, one of the causes for such non-coordination is the poor information related industries have when planning their work. The way out is to compile unified plans, to establish material responsibility for all of the junction's enterprises for their fulfillment. We consider it highly necessary in this regard to leave the right to temporarily increase or reduce the volume of loading (unloading) of cars, depending on the operational conditions, to the work groups at the junctions which have been converted onto a continuous planning schedule. In this case, the confirmed monthly plan and responsibility of the enterprises for its fulfillment should remain unchanged.

Of course, such a coordination of plans is impossible without a fine state of mutual information. The following is becoming more and more obvious: the timely handling of the fleet and rolling stock for the railroads depends to a significant extent on the depth of transport information content and rapidity of its transmission through communication channels. And if the fleet workers have already acquired a certain amount of experience, there is essentially none to be found among railroad workers and truckers.

One must begin with the fact that railroad management receives information concerning car movement into port only 1-2 days in advance. But even this information contains incomplete data for compiling continuous plan schedules. In this light, it is necessary, in our opinion, to develop and incorporate more effective systems for assembling information at rail yard entry stations in the shortest periods of time so as to transmit it to computer centers in a timely manner.

The creation of a reliable communications system within each enterprise of the transport center is also important in our view. As an example, at the present time there are only operative telephone and loudspeaker communications at the port of Il'ichevsk. It is necessary for the control of production processes in loading and unloading areas to assemble and transmit a great volume of operative information, including that for subsequent computer processing. Unfortunately, there is as yet no modern equipment for this purpose.

The problem of receiving information from enterprises which supply export production is also unresolved. It is true that the Ministry of Transportation's computer center transmits to the ports and port terminals information concerning the loading of export products, how much and what kinds of goods are being dispatched on one or another of the network's mainlines every day through the computer center of the Odessa Railroad. But how and when these trains with these cargoes will be marshalled and which ships will arrive to receive them still remain unknowns.

The active aid of appropriate ministries and departments is necessary to solve these and other questions. It is also necessary to be concerned about equipping the computer centers with channel processers, equipping of available computers with the available peripheral equipment, etc. It is also necessary to attract the industry's scientific research institutes to develop organization and information provisions for uninterrupted planning at the transport junctions.

All of this, it is felt, should be taken into consideration in the overall program for development of the junctions.

9194
CSO: 1829

RAILROAD

LONGER, HEAVIER TRAINS IN USE ON THREE RAILROADS

Moscow GUDOK in Russian 5 Mar 81 p 2

[Article entitled "With the Green Light"]

[Excerpt] Voronezh

V. Serebryakov, deputy head of the traffic service for the Southeast railroad answered our call. He told us that the initiative of the Muscovites to send out long, heavy trains had found support among railroad workers of the Southeast railroad, as witnessed by the figures. In January, as compared with the same period last year, the weight of the trains had increased by 56 tons on the average and by 79 tons in February. Fifty thousand tons of national economic freight had been delivered beyond the quota in just the first ten-day period. The contribution of the personnel from the Yeletskoye division is significant. The heavy trains pass through here with the green light and at high speed.

Presently, trains weighing 4-5 thousand tons have become the norm on this Southeast railroad. More than 200 of them are sent out onto the line during the course of a single day. This has correspondingly increased the average daily productivity of the locomotives. In January it was 40 gross ton-kilometers beyond the plan, and 79 in February.

Alma-Ata

"Now personnel on our railroad are working better than yesterday, and tomorrow they will work even better," N. Dzhamabayev, deputy head of the locomotive service, assured us. "In January, the average weight of a train on the line was increased by 58 tons, or by almost 1 percent. 10,887 full-weight trains passed through, and more than 4 million tons of national economic goods beyond the plan were conveyed. The quota was also exceeded in February. It has been a long time since we have achieved such high results, and the secret is simple. First, we reduce the empty run for locomotives by 3 percent. Second, at sites where the weight is broken down, wherever the critical norm will permit it, we now add 400 additional tons of cargo to trains going from the Karagandinskoye division to Dzhambul, Agryz and further on the Central Asian line. We also do the same when marshalling trains for several other routes. Third, we have established strict control so as not to dispatch trains which are not full weight. Unfortunately, the flow of heavy trains must be retarded from time to time because our track service facilities are still not adequately developed at many stations.

"We are now awaiting the arrival of new three-unit mainline 3TE10M diesel locomotives. They will permit us to develop the competition for accelerating transportation of national economy freight even further."

Donetsk

The deputy head of the line's locomotive service, N. Volgina came to the telephone.

"Our engineers have mastered driving heavy coal-powered trains, the weight of which exceeds the standard norm by one and a half times. Ten thousand such trains have passed through since the start of the year, and 0.7 million more tons of cargo than last year have been transported in them.

"The locomotive brigades of the Krasnoarmeysk depot alone have moved more than 2 million tons of freight beyond the already high norms in heavy trains during the 2 months of this year, and they conserved 3500 kilowatt-hours of electricity.

"The contribution of the thrifty is on the rise. Since the start of the year the line's locomotive brigades have saved more than 5 million kilowatt-hours of electricity. The diesel engine operators worked on saved fuel the day of the opening of the 26th Congress.

"We regularly conduct schools for exchanging advanced know-how according to an established tradition. Today, it is the achievement of the innovators and tomorrow it is the norm for all. This is the device under which the workers of the locomotive service of our line have been working since the first days of the 11th Five-Year Plan."

9194
CSO: 1829

MODERNIZATION OF FLEET REPORTED

Moscow MORSKOY FLOT in Russian No 10, 1980 pp 30-32

[Article by B. Roginskiy, candidate of economic sciences and docent at LVIMU (Leningrad Higher Engineering Nautical School imeni Admiral S. O. Makarov), V. Vlyal'ko, assistant professor at LVIMU, and A. Nellis, deputy chief of the technical division of the Baltic Steamship Line: "Modernization of the Fleet Is a Production Reserve"]

[Text] The growing intensity of work by the maritime fleet demands that we search for reserves in the operation of existing vessels. One of these reserves is modernization of the fleet, which can involve a change in the purpose of a ship, its cargo functions, or particular parameters. These refinements improve the efficiency of use of the equipment and obsolete vessels, which ultimately produces a substantial economic impact.

The current phase of development of the maritime fleet is characterized by the growing influence of scientific-technical progress and the intensification of random factors inherent in it. This finds expression in the fact that the working conditions of maritime vessels and technology of shipping are constantly changing, new types of cargo are appearing, and so on. Fixed capital becomes obsolete at a faster pace owing to the accelerating rate of scientific-technical progress. This is characteristic of maritime transportation. Moreover, because of the special features of the operation of a maritime vessel (the concentration of output from different sectors in the vessel, the significant volume of fleet work abroad, the long service life of ships, change in operating conditions, and the like) obsolescence in maritime transportation reaches significant scope and involves considerable losses.

In view of scientific-technical progress and changes in the economics of transportation and the structure of foreign trade cargo, significant adjustments are made in fleet operating conditions every 7-8 years.

Thus, whereas 1965 was the beginning of the container revolution in transportation, 1972 saw certain changes in the working conditions of container carriers because containers of new sizes and for different purposes had appeared. The height of large containers is continuing to increase, especially since 1977. Containers which are 8.5 and nine feet high have become widespread and there are reports of preparation to produce containers 10 and 10.5 feet high.

At the same time, significant changes are taking place in the navigation, commercial, legal, and organizational conditions of fleet operation as the result of changes in the requirements of international conventions and classification societies, labor safety regulations, and national laws. Thus, the increase in the number and size of ships, the growing intensity of navigation, expanded oil shipping, and the increasing probability of accidents necessitated stricter requirements for the fleets with respect to insuring that they are operated in an environmentally safe manner.

Of course, the service life of a ship is 20-25 years. During this time, naturally, the operating conditions and shipping technology undergo numerous changes while the technical characteristics of the ship remain constant with respect to its operations. This reduces the working efficiency of the fleet and causes obsolescence.

One of the chief means of maintaining an older ship at a contemporary technical level and, consequently, improving the efficiency of its operations under current conditions is modernization of the fleet and adaptation of ships to carry cargo using new technology.

The decline in efficiency of use of equipment after the passage of a certain period of time makes modernization a constant factor in reproduction of fixed capital. The economic advantage of this form of reproduction is that it preserves the embodied labor of the part which is not changed when modernization steps are taken.

Therefore, modernization is particularly effective with complex and expensive means of labor such as transport ships.

Modernization raises labor productivity and permits efficient use of labor in new, changed operating conditions. This raises the use value of an older ship and reduces possible losses of past labor in the form of undepreciated value in case the ship is taken out of use.

Improvement of a ship also involves reducing possible losses of live labor as the result of growth in productivity and the more economical functioning of the modernized unit. Modernization is more practical and flexible than any other method of replacing fixed capital, and this is especially important given the accelerated pace of scientific-technical progress. Under contemporary conditions, therefore, modernization must be viewed as a form of rational and correct operation of the fleet, not simply the result of mistakes by designers. In fact, during the designing and construction of classes of ships such as the Pioner Vyborga, Variyemyunde, and others, it was impossible to anticipate the appearance of taller containers. Therefore, the ships must be modernized during their working life (see illustration [not reproduced]).

In their research on this important problem, economists are narrowing the set of conditions in which modernization of ships that do not meet contemporary requirements is essential and reduce it to nothing more than steps to improve and support the labor of ship personnel with respect to design defects and the technical condition of the ship. Therefore, modernization of ships today is viewed as an extraordinary thing and is only done for a small part of the fleet.

The idea exists in economic literature that it is possible to determine the specifications and parameters of a ship with such precision and reliability that it will operate efficiently for its full service life without any modernization whatsoever. The real situation in maritime transportation shows that this is not possible at all because the shipping process has a random character. This reflects not just questions of operational planning where the random character of the shipping process is acknowledged by a large number of economists and operations workers, but apparently also questions of future planning, in particular designing a ship whose service life is set at two decades or more.

It is often said that the operating condition of ships can be predicted for a long period of time. Certainly, without this it would be impossible to design a ship, but we must remember two things. In the first place, the prediction has certain limits to its reliability; in the second place, the probability of its realization is also limited, and predicted characteristics cannot be taken as absolutely real ones, although this is the mistake made in the use of predictions today. Naturally, therefore, we must search for rational ways to modernize the ship during its operation.

Under current low market conditions the level of income production for tonnage is dropping, which slows down the process of updating the fleet. The gap between the parameters of maritime vessels in operation and changing operation conditions will require improvements in the means of transportation. This gap can be overcome by modernization, so its role in improving the technical-economic state of the fleet is growing substantially.

Under current conditions work to develop a program to build up the fleet should include modernization of existing tonnage as one of the constituent elements. This is the only way to insure correct solutions to the problems of substantiating new types of ships and optimal fleet composition.

The world shipbuilding industry today has sophisticated technology for modernizing maritime vessels. Continued growth in the volume of modernization work being done under domestic conditions by ship repair yards will enlarge their role in the system of the sector, strengthen the material-technical base, and promote a significant increase in the qualitv of repair of the transportation fleet and more efficient use of it.

The capabilities of the ports must be considered during modernization. Improvement of a ship without considering the possibility that it will increase the intensity of cargo handling operations in ports will not solve the problem of the "interface" between the transportation fleet and shore facilities.

Modernization is equivalent in character to new capital investment in fixed capital. It requires significant expenditures and, certainly, must be supported by reliable means of financing. This question has not been fully resolved today. In the first place, given the specific features of work by the maritime fleet the source should be currency loans covered by the increase in ship income after modernization. In the second place, it is advisable to include expenditures for modernization in the calculation of the amount of the depreciation fund (at least once for the service life of the ship so that depreciation deductions can also operate as a source of financing for modernization activities). In the third place, the production development funds of steamship lines and associations of the Ministry of the Maritime Fleet should be a source for modernization.

The wisdom of modernization should be determined on the basis of an evaluation of the efficiency of modernizing a ship within the setting of all ships and shipping because it has an effect not just on the results of the modernized ship's work but also on all the tonnage which works within the system of cargo shipping where the modernized ship will be used. In deciding the question of modernization, therefore, consideration must be given not only to the direct expenditures and income of the ship, but also the "feedback" expenditures and income that occur as a result of change in the operating conditions of other ships in relation to modernization of the particular ship.

Modernization must not, however, become a goal-in-itself. Only a study of the objective prerequisites that make modernization essential and an analysis of the acceptability of the particular course of modernization will provide a reliable estimate of its efficiency. Furthermore, the significance of different courses of modernization may vary depending on the particular phase of development of the national economy as a whole and of the particular sector taken alone.

Three types of modernization are possible: functional modernization, cargo-handling modernization, and modernization of particular ship parameters.

Functional modernization ordinarily involves a change in the designation of the ship. An example would be re-equipping an old or relatively worthless ship which is obviously unprofitable to operate in certain cases, and getting a new ship that performs a needed function. This provides a new type of vessel with minimum expenditures of time and labor. Functional modernization makes it possible to overcome a shortage of certain types of ships resulting from the appearance of new types of cargo and changes in operating conditions.

Scientific-technical progress in maritime transportation has involved the appearance of new types of cargo and changes in the characteristics of old types, new requirements for shipping goods, and refinement of cargo-handling technology. The efficiency of maritime ships not adapted to new cargo transportation conditions declines sharply. The answer to this problem is to modernize the ship in relation to its cargo function (cargo-handling modernization) without changing the ship's function. Two examples would be increasing the height of the coamings of the cargo holds to make it possible to load nine-foot containers and adapting cargo compartments to ship dangerous cargo.

Modernization of particular ship parameters is a process where all the characteristics of the means of transportation are preserved, but certain parameters of the ship are improved (refined). Examples would be increasing the speed of a ship, installing mechanized tank cleaning equipment using chemicals on the ship, modifying the fuel preparation system to use less expensive grades of highly viscous fuel, and installing systems for full mechanization of power plants.

It must be kept in mind with such a classification of the basic purposes of fleet modernization that in practice one does not usually encounter a pure case of one type, but rather an expedient combination of types.

The economic efficiency of modernization depends on the time it takes. The performance of a growing volume of modernization work quickly is being held back by the limited production capability of the ship repair yards, which are overloaded with ship repair work. Moreover, their technological capabilities do not meet contemporary requirements for modernization work.

In addition, the Ministry of the Maritime Fleet does not have statutes that regulate modernization by shiplines and yards, that is, planning, financing, record-keeping, and reporting. The statute on technical operation of the maritime fleet merely establishes times for turning over technical documents related to modernization work to the yards, ignoring the fundamental issues of controlling modernization of the fleet.

Because there are no statutes on modernization, the time taken for this work increases since ship repair yards set these times on the basis of standards for ship repair work. But modernization work differs significantly from ship repair work, for example by the fact that a large number of jobs must be done from the beginning. This requires different forms of setting time norms for shipyard modernization jobs.

The development of rational procedures for controlling and organizing fleet modernization and expanding the production capacities of the shipyards of the Ministry of the Maritime Fleet are a very important problem for both the economics of maritime transportation and technical operation of the fleet.

From the Editors

> The Administration of Technical Operation of the Fleet has informed us that systematic fleet modernization work was done throughout the period 1950-1980. In the 1950's and early 1960's ships were converted from coal heating to liquid fuel, which made it possible to free a large group of seamen from the hard, unproductive labor of firemen and raise the efficiency of fleet work. In the 1960's the ship repair yards of the Ministry of the Maritime Fleet did a significant volume of work to equip ship holds with mechanized hatch covers, which made the work of seamen much easier.

In recent years various kinds of jobs have been done systematically with a view to improving economic efficiency. In the 8th and 9th Five-Year plans a great deal was done to convert ship power plants to the use of heavy grades of fuel; the economic impact of this runs into tens of millions of rubles. Work has been done to adapt general-purpose ships to carry containers, to re-equip compartments, to install remote control systems for power plants, to replace screw-rudder complexes, to convert ships to sailing with a new load-line mark, and many others.

As for the necessity of doing modernization work to make the fleet correspond to the various conventions that are adopted by the Intergovernmental Maritime Counsultative Organizations, this work is being planned and done under the control of the appropriate structural subdivisions at different administrative levels. At the present time work is underway to prepare to re-equip the fleet to conform to the SOLAS-74 convention, the MARPOL-73 convention, and the corrections to it adopted in 1978.

The arguments of the authors about the need to produce containers 8.5 feet high instead of 8-foot containers are correct and this work is planned and will be done when planned. In the opinion of the Administration of Technical Operation of the Fleet, some of the questions raised in the article such as modernization to increase speed and increasing depreciation deductions for modernization, require concrete economic substantiation in each particular case.

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OCEAN AND RIVER

MIXED TRANSPORTATION: PROBLEMS, POSSIBILITIES

Moscow RECHNOY TRANSPORT in Russian No 2, Feb 81 pp 19-20

/Article by P. Olenev, department chief of the Main Administration for Cargo: "Mixed Transport Hauls: Problems and Possibilities"/

/Text/ The effectiveness of hauling freight in direct mixed railroad transport is obvious: the distances of the freight hauls by railroads are reduced, railroad rolling stock is freed up, and savingsare made on transport outlays, fuel, and electric power. In mixed transport the cited outlays per ton of timber freight are reduced from 1.5 to 6.44 rubles, and those of coal--from 0.84 to 4.95 rubles; the runs of railroad cars in hauling ore from the Kursk Magnetic Anomaly are cut by 1169 km, while for Kola iron-ore concentrate the corresponding figure is 1250 km.

However, freight hauls in this mode of transport are increasing very slowly. The principal causes holding back their growth, in our opinion, are as follows: the lack of the necessary funds on the part of the consignees of bulk freight to perform hauls with the participation of river transport in the amounts of the annual needs, developing rational schemata of freight flows in the country without taking into consideration the maximum utilization of river transport, and the behind-schedule delivery of freight to customers because of the insufficient transfer of railroad cars to the trans-shipment ports. In order to eliminate the above-mentioned shortcomings, it would be feasible for USSR Gosplan to plan the hauls of certain types of freight (for example, fuel, timber, and industrial raw materials) for enterprises which tend toward river transport and which have appropriate warehouse areas; river transport workers should haul cargo in the amounts of the annual need during the shipping period. The Ministries of Railways and River Fleet must work out a scheme of rational freight flows, taking into consideration the transfer from railroad to river transport of the maximum amount of bulk cargoes, following parallel water routes.

Despite the fact that the average time for processing railroad cars in trans-shipment ports has been reduced during the past few years, and the use of cars with respect to freight capacity, as compared with the level achieved in 1975, has increased by almost seven tons, the freight remaining in ports awaiting trans-shipment to railroads is constantly increasing and usually amounts to more than 7 million tons by the end of the shipping season. Such an accumulation of freight in the ports of the Ministry of the River Fleet leads to a disruption in the time periods scheduled for its delivery, a reduction in the through capacity of the trans-shipment ports, and a reduction of the total amounts of freight hauled in direct, mixed railroad-water transport. Because of the lengthy delays of freight at the trans-shipment ports, individual ministries and departments refuse to submit it for mixed-transport hauls.

USSR Gosplan has adopted a resolution (beginning in 1979), coordinated with the Ministry of Railways and the Ministry of the River Fleet, on developing and approving annual plans for mixed-transport hauls with a breakdown by quarters. It is recommended that the Ministry of Railways, Ministry of the Maritime Fleet, the Ministry of the River Fleet, and the administrations of the river fleet of the Union republics promulgate a bonus system for the divisional workers of railroads, maritime, and river ports for fulfilling and overfulfilling the quarterly and monthly plans for the trans-shipment of freight. In determining the winners in a socialist competition for a quarter, consideration should be given to the fulfillment of the plan for trans-shipping freight equally with other very important indicators. The total volume of a trans-shipment is distributed by directions, and within the plan for trans-shipment from river to railroad transport distinctions are made between coal, timber, ore, chemicals, and mineral fertilizers; their trans-shipment is calculated within the fulfillment of the loading plan with regard to types of freight. It would seem that the decision which was adopted should sharply increase mixed hauls, but this has not occurred. The plan for hauling freight in direct, mixed railroad-water transport in 1979 was fulfilled neither with regard to routes nor with regard to the products list. Moreover, 5 million tons less of freight were hauled as compared with the 1978 level. In 1979 some 157,700 loaded railroad cars failed to arrive at trans-shipment ports; this amounted to 9.2 million tons of freight.

Each year the ports experience great difficulties in preparing their facilities for the upcoming shipping season. Because of the enormous amount of freight left over from the previous shipping season connected with the failure to deliver empty railroad cars, it is impossible to refurbish the warehouses, wharves, and covered areas of the port territory. The tracks are completely clogged up, the movement of the cranes is limited, and there are no sidings available. As of 1 January 1980 the trans-shipment ports had more than 6.3 million tons of various types of freight, which had been delivered during the shipping season of 1979, awaiting transfer to railroads. Bauxite amounting to 30,000 tons has been lying at the port of Kambarksk since the shipping season of 1978.

Nor did the situation improve in 1980. Millions of tons of timber, ore, coal, and other freight were delivered by railroad parallel to water routes. For 1980 the Ministry of the River Fleet established a plan for hauling freight in mixed transport amounting to 58.5 million tons, or with an increase of 22 percent over last year's level. But already in the first quarter of 1980 the fulfillment of the plan for mixed hauls amounted to only 76 percent. One of the reasons for this was the slow shipment out of freight from trans-shipment ports, freight which had been delivered in 1979.

Within the norm for delivering empty railroad cars of 73,560 units, as established by the Ministry of Railways for the first quarter, only 55,841, or 75.9 percent, were actually delivered. In connection with this, during the period when the shipping season opened at the ports of the Ministry of the River Fleet, an exceptionally crowded situation developed. At the time when the shipping season opened the ports had more than 2.6 million tons of freight on hand. For many ports it was practically impossible to accept new freight for loading the fleet from the very first days of the shipping season, and as a result of this the freight was hauled by railroads running parallel to the water routes.

On several occasions the Ministry of Railways issued orders to the railroads to improve the delivery of cars to the trans-shipment ports. However, these orders have not been carried out. For nine months of 1980 only 40.1 million tons of freight within a planned amount of 51.6 million tons were hauled in direct, mixed railroad-water transport.

The principal causes for the non-fulfillment of the plan for freight hauls are as follows: shortages in the delivery of freight cars to the trans-shipment ports, unsatisfactory delivery of empty cars to the ports for shipping out freight, insufficient quality and abrogation of the time periods for delivering freight. Over a period of nine months some 168,830 freight cars, or 10.2 million tons of various types of freight for trans-shipment, failed to arrive at the ports. During the culminating period of the shipping season freight began to arrive at a more intensive rate, and this led to an accumulation of railroad cars in the ports, waits for them to be unloaded, and an increase in the time required to process them. The unsatisfactory delivery of loaded freight cars to the ports for the first stage of trans-shipment, and especially that of empty railroad cars to the ports for the second phase of trans-shipment, created a delay for the freight at the river ports, and it compelled the freight dispatchers to adopt measures for hauling the freight by means of railroad transport. As of 1 October 1980, 90,179 empty railroad cars remained undelivered to the ports of the Ministry of the River Fleet. As a result of this, some 6.3 million tons of various types of freight for trans-shipment remained undelivered in the warehouses of the ports.

River transport has also done a poor job in shipping out freight. For almost the entire shipping season 60--70,000 tons of iron pyrites for chemical enterprises in the southern part of the country lay in the port warehouses of Tol'yatti, while 300,000 tons of coal for the electric-power stations of the Ukrainian SSR remained at Kuybyshev and Syzran'.

The ministries and departments overstate their annual requisitions and fail to support them with actual cargoes within the quarterly planning. Every year there is a non-fulfillment of the annual plans by the USSR Ministry of Non-Ferrous Metallurgy with respect to the submission of iron pyrites to be hauled, by Soyuzglavles--for logs, and by Soyuzglavugol'--for coal.

The decree of the CPSU Central Committee and the USSR Council of Ministers, entitled "On Measures to Develop River Transport During the Years 1981--1985," has provided for a switchover from railroad to river transport of 24--33 million tons of various types of freight for the national economy. In order to carry out the tasks which have been assigned, the Ministry of the River Fleet has developed proposals to eliminate inefficient freight hauls. Plans have been made to bring the volume of Kuznetsk coal up to a level of 12.4 million tons. In order to accomplish this, it is necessary to put into operation wharves to trans-ship the coal from railroad transport to river transport at the port of Kambark, to to construct wharves to receive coal from river vessels at the ports of Vashino and Dzerzhinsk, to organize the reception for trans-shipment of no less than 1 million tons of coal by maritime ports in Berdyansk and Zhdanovo. Provisions are being made to increase the hauls of iron ore from the Olenegorsk and Kovdorsk deposits to 3.5 million tons. However, this can be accomplished only on condition that a mechanized wharf is put into operation at the industrial port of the Cherepovetsk Metallurgical Plant.

Without any additional capital investments the trans-shipment of 1 million tons of Kursk ore can be guaranteed with trans-shipment at the Ust'-Donetsk and Perm' ports.

Plans have been made to increase by 1.9 million tons the haulage of iron pyrites from the Ural regions to the European part of the USSR, with a trans-shipment to river transport via the ports of the Volga-Kama Basin, by 1.5 million tons the haulage of apatite concentrate, including that to Cherpovets by 0.6 million tons; hauls of this raw material will again be organized with a trans-shipment through the port of Astrakhan' in the amount of 0.5 million tons to enterprises in the Northern Caucasus and Central Asia, and through Balakovo in an amount of 0.2--0.3 million tons to the Balakovo Plant. In order to carry out the above-mentioned hauls, it will be necessary as early as 1981 to put into operation cargo-handling machinery at the Cherepovets industrial port, trans-shipment wharves at the Astrakhan' river port, and a specialized wharf with rail sidings at the Balakovo Plant.

Plans have been made to increase hauls to as much as 2.3 million tons of timber freight from the country's northern and eastern regions to the Donbass, to the Northern Caucasus, and to the lower Volga region, with trans-shipments to river transport at the ports of the Volga and Kama Rivers. The implementation of this measure, however, depends to a large extent, on Soyuzglavles, the Ministry of the Timber, Pulp and Paper, and Wood Processing Industries of the USSR, as well as the Ministry of Railways. It is also possible to switch over from direct railroad to mixed railroad-water transport the haulage of 1 million tons of Siberian timber for enterprises in the southern section of the European part of the USSR, with trans-shipment and the formation of rafts in Verkhnechusovskiye Gorodki. For this purpose the Ministry of the Timber, Pulp and Paper, and Wood Processing Industries of the USSR should build a timber trans-shipment base here with a roadstead for forming rafts.

On condition that the Sergino timber trans-shipment base is expanded and a roadstead is created at the mouth of the Ket' River, we could carry out the haulage of 0.5 million tons of wood from the Ket' River Basin by river transport in rafts to the trans-shipment base at Sergino.

It would be feasible to organize hauls in direct railroad-water transport of 0.9 million tons of molding sand from the Burtsevsk pit /quarry/ for the Kama Motor-Vehicle Plant, as well as the transport of 0.8 million tons from the Verkhnedneprovsk Mining and Metallurgical Combine (GMK) for the Gor'kiy Motor-Vehicle Plant and the Yaroslavl' Motor Plant. After the construction of wharves in Solikamsk and Berezniki for shipping out potassium fertilizers in containers, wharves of Goskomsel'khoztekhnika with base warehouses for unloading fertilizers from river vessels, as well as a wharf for receiving potassium chloride, hauls will be guaranteed of potassium fertilizers and commercial salt from the enterprises of the Uralkaliy Production Association in an amount of 1.3 million tons.

We could increase the haulage of grain by river transport, bringing it up to as much as 8 million tons, on condition that the RSFSR Ministry of Procurements increase by a factor of 1.5--2 the capacities for unloading grain at the elevators and mills alongside the rivers.

Further technical and economic quests will allow a considerable increase in the switchover to river transport of freight which is now being carried by railroads running parallel to the water routes.

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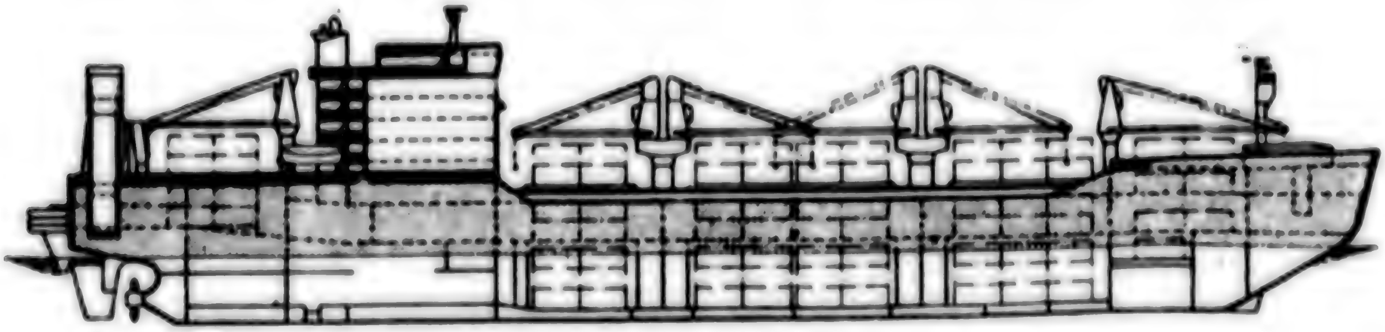
FINNISH-BUILT DRY-CARGO SHIP FOR WORK IN THE ARCTIC

Moscow MORSKOY FLOT in Russian No 12, 1980 p 33

[Article: "A Ship for the North"]

[Text] The Finnish Valmet and Vyarsilya shipyards are building dry-cargo ships with a deadweight of 20,000 tons each for the Soviet Union. These ships are designed for work in the Arctic regions of our country. The maximum length of the ship is 173.6 meters, with a width of 24.8 meters. Its maximum draft is 10.5 meters, with a speed of 17 km knots. This is a new type of ship for general cargo. It has six holds and a tweendeck. Cranes capable of lifting up to 40 tons each are installed on the deck. A ramp five meters wide in the stern of the ship can also be used to load the tweendeck. The ship can travel in ice up to one meter thick and operate at temperatures down to -50 degrees C.



This ship will have the heeling system and bow and stern lines typical of icebreakers and will meet the requirements of the ULA [possibly general-purpose Arctic icebreaker] class of the USSR Registry. The power plant consists of two diesels that develop an output of 15.4 megawatts (21,000 horsepower).

The ship's holds have a capacity of 28,000 cubic meters and can carry various types of cargo, including general cargo, heavy articles, chemicals, coal, ore, and grain. The tweendeck can hold roll-on cargoes with a total length of 600 meters for trailers and 900 meters for motor vehicles. This area also has securing devices for 500 20-foot containers, 50 of them refrigeration-type. The enclosed hatches can also hold stacked lumber. The ships will go into operation in 1982-1983.

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COMPUTERIZED MANAGEMENT FOR SHIP REPAIR

Moscow RYBNOYE KHOZYAYSTVO in Russian No 12, Dec 80 pp 14-15

[Article by V. I. Podobedov and A. M. Orlov of the TsPKTB VRPO "Sevryba": "Experience in Developing and Introducing an ASU at the Murmansk Shipyard association"]

[Text] An effective way of accelerating the repair of ships is by the introduction of progressive methods of repair with the use of econo-mathematical methods and computers; that is, by the development of an automated system of management for ship repair.

In planning the design procedure for the ASU of the Murmansk Shipyard association (ASUO MSV) [Automated Management System of the Murmansk Shipyard association] and in the selection of the primary tasks, the developer (the TsPKTB [Central planning and Design Technological Bureau] VRPO [All-Union Fish Industry Association] "Sevryba") and the client (the Murmansk Shippard association) conducted an analysis of automated management systems for ship repair which were operating in the industry at that time. The analysis showed that all the developers of these ASU are oriented toward the use of repair documentation which is created for each type of ship separately. Since ships of many types are repaired at the Murmansk shipyard, such an approach to the creation of the standardized basis is not applicable. It was necessary to develop a fundamentally new technique of building up a standardized basis, a significant part of which could be used in the repair of ships of any type. Because such techniques,which involve the use of third generation computers, have not been developed, it was necessary to make an examination of the principles of building up in industrial conditions, a standardized basis for an ASU for one complete technological stage of the reair of a ship in order, with that, to disseminate the solution worked out for use in the establishment of the NSI [expansion unknown] for all production. For this purpose, drydock repair was selected as being the best supplied with standardized directory documentation (the TRV [Tipovaya Remontnaya Vedomost',standardized repair list] and the work-sequence-and-schedule diagrams). This relatively small volume of documentation can be quickly processed and entered into a computer memory. In addition, drydock repair is a good model for all ship repair production because the majority of drydock work is done by one shop which can, provisionally, be considered as an individual plant.

In addition to that, drydock repair imposes extremely rigid restraints on the ASU being developed in the relationship of the demands to the effectiveness of its response.

Experience in designing and using an ASU at ship repair enterprises shows that the greatest capacity is achieved with automation of the subsystem for operational management of the primary production (OUOP). This capacity, however, can be achieved in full measure only with automation of another subsystem; namely, management of the technical preparation for production (UTPP), because the manual building up of the source information of the subsystem for operational management is very laborious, requires much time, but, chiefly, it lags behind the movement of the production process.

Therefore, in the composition of the first stage of the ASUO MSV it was decided to include the most urgent tasks which, by the time of the conclusion of their design, would have been provided with a standardized basis sufficient for their effective adoption. Simultaneously, it was necessary to develop the principles and create the methodology for building up a standardized basis which could be the foundation for use in creating an NSI for a specific combination of unified and generalized, standardized or individualized, repair documentation. In the first stage (1976-1980), the subsystems for the standardized directory system were developed with simultaneous creation of: the technique for building up the standardized basis, the sets of tasks for the management of drydock repairs, and the subsystem for management of the technical preparation for ship repair production as a whole.

Principle features of the approach to the design of the ASUO MSV, and in the first place, to the formulation of a methodology for creating the standardized basis are the following:

The adoption of a unified system for coding mechanisms, devices, and ship structures that makes the coding possible independent of the type of ship, the purpose, or the location of devices or mechanisms on it.

The unification of the designations of ship repair operations which can be used during the repair of individual ships. With this, the period for the development of the NSI for new types of ships is expedited.

The use of through documentation from ship owners to shop. With this, each user enters only the information necessary to him which permits a sharp reduction in its volume and improves its quality.

The possibility, in the composition of orders, to indicate only the category of the repair. This substantially simplifies the interrelationships of the ship owners and the ship repair enterprise. In this, the computer makes a print-out of the designations of the work and calculates labor consumption, material consumption, etc.

The development with the aid of machine statistics of calculated standards and price lists; that is, the final prices for ship repair work.

The possibility of transfer to an NSI of lower level, as for intrashop planning or issuing orders.

The advantages of the proposed forms and the techniques for completing them is that in the repair of the hulls, pipelines, electrical and other equipment which make up 50-60% of the repairs on all ships, a general, standardized reference documentation is created. It contains norms per unit volume of the work being done with allowance made for different parameters (thickness, diameter, camber, and so on). These norms, not tied to the designs of specific types of ships, are created once for the enterprise and are used in the repair of any type of ship. Such norms are made applicable to a specific ship by means of the document: "Record of ship repair (Report of defect survey)" - the VSR, in which the amounts and locations of the work being done only on this ship are listed.

Much work is being done on the development of standardized directory documentation for the repair of single-type mechanisms. At present, for the repair of structurally similar mechanisms and devices, a single, unified documentation is being worked out and the software for its processing is being developed. That will permit additional reduction in the volume of the standardized basis and the cost of its development, especially for the repair of ships coming from new construction.

To reduce the volume of the ordered information, the defective-part information, and the input information, the designer of the ASU developed the multipurpose document - the VSR. Such a record is made up for each unit (mechanism, device, and structural part of a ship) being repaired and it does not contradict the RTM [leading technical materials] No. 053-231.366 "Technological Documentation for Ship Repair".

The VSR is developed on the basis of the standardized reference records of ship repair work (the NSVR) and differs from standard repair records (the TRV) used earlier in the significant curtailment of the information. The VSR is being used as the ordering documentation and the defect survey report, and it also serves as the source document for the input of necessary information into the computer before and after the defect survey.

On the basis of such a record, filled out for a specific ship, and also the standardized information stored in the computer memory, the necessary documents are formulated and sent to the subdivisions of the Murmansk shipyard. In the computer center a calculation is carried out twice:

> The first time, on the basis of the ordered documentation, the necessary forms are issued for a preliminary agreement on the volumes and designations of the work, for making up preliminary estimates, and for instituting dismantling and preparation for production in the repair of the ships.
>
> The second time, on the basis of the report of the defect survey, documentation is issued in which are listed the actual man-hours per job, the actual designations of the work, the required quantity of materials, and other data necessary in repairing the ships.

The VSR - a unique document of the client and the defect surveyor, is prepared by hand. With the VSR, the expenditures of time in the manual preparation of documentation is reduced several times.

The standardized reference record of ship repair work (The NSVR) and the index of work for the standardized work-sequence-and-schedule diagrams (the ORSG) are the basic standardized reference documents in the subsystems for management of the technical preparation for production and for operational management. This record differs from the customary TRV by the presence of the codes of information, and by the method of completing and organizing the work. The list of work is kept in strict technological sequence, taking into account the time for accomplishing the jobs and their precise distribution among the production subdivisions. This permits using the means of automation for the formulation, on the basis of the NSVR, of the planning and accounting units for each of the production divisions.

The ORSGs serve for the formulation of the work-sequence-and-schedule diagrams for the repair of specific ships.

In December 1979 the first phase of the ASUO MSV had been developed and accepted into industrial operation by a commission of the Ministry of the Fishing Industry of the USSR.

The objectives of the subsystems of the standardized directory system, the management of the technical preparation for production (drydock repair), and the operational management of the primary production (drydock repair) went into the first phase of the Ist stage of the ASUO MSV.

The solution of the objectives provides for creation and introduction of standardized directory information, the calculation of labor intensiveness and the requirements for materials in the repair of ships along with the simultaneous formulation of shop repair records, of the operational nomenclature of plans for the shops on the basis of the work-sequence-and-schedule diagrams with allowance made for the distribution of labor resources, the calculation of subdivision workloads, and other planning and accounting information for drydock repair. The methodology of creating the standardized basis for the ASU was developed by the ship repair enterprise.

The industry commission recommended the methodology for use as a standard in the design of an ASU by a ship repair enterprise.

The estimated economic effectiveness from the adoption of the objectives of the first phase amounted to 342.6 thousand rubles and was achieved by means of a reduction of the duration of ship repairs through the optimum distribution of labor resources and the improvement of operational management and of the preparation for production.

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CSO: 1829/227

OCEAN AND RIVER

MISUSE OF VEHICLE CARRIERS

Moscow VODNYY TRANSPORT in Russian 11 Apr 81 p 2

[Article by chief engineer of ships of the Baltic maritime shipping company, V. Kharchuk: "The Price of Carelessness"]

[Text] Baltic seamen have evaluated the quality of the domestically built vehicle carrier "Ivan Derbenev". I will say from my own experience, having had occasion to sail on it, that to me, it seems very good. In my opinion, however, despite all the advantages of the specialized ship, it is not being used as intended. For example, the vehicle carrier had put into the port of Hull for a load. As expected, the cargo was delivered on trailers. But in loading it onto the ship, it was taken off the trailers and stowed by forklift trucks as in an ordinary hold. To sum it up simply, it took six days and it was necessary to pay the longshoremen for work on a Sunday. At the same time, the consignment of cargo proved to be small - 2.5 thousand tons in all.

To me, although I am not exactly a specialist in this field, it was clear that if an ordinary ship, let us say of the "Krasnograd" type, had called for this cargo, then by working in the several holds and using their whole capacity, more cargo could have been taken and the processing completed more quickly. There would be a saving of state funds.

Naturally, the question arises: why then was a vehicle carrier and not an ordinary motorship sent to Hull?

In my opinion it all took place because of the negligence of the operators, the noncoordination of the actions of the transport services, and the unwillingness of one KhEGS [Khozraschetnaya Ekspluatatsionnaya Gruppa Sudov , Self-supporting Operational Group of Ships] to give up a cargo to another at whose disposal are just exactly the ships needed for the specific type of cargo. Thus, they act as though they are loading"their own" ships. But at what great cost to the shipping company and, in the end, to the state!

Certainly,in Hull, the cargo was not intended for a vehicle carrier. By the way, in this same port - we called attention to this - about twenty of the maritime fleet's trailers had been abandoned by a fence. Was it really impossible to use them, or to return them to Leningrad for repair, especially as the deck of the ship was half clear?

On that run we were lucky during a return. Although there were more than 20 ships in the roadstead, we were quickly put at a pier. Likewise, almost without delay, they took the cargo out of the hold. But in unloading fourteen 40-foot containers from the upper deck, longshoremen of the third area spent more than 20 hours. And then, when the job was nearly done - something like five containers remained to be unloaded - the team departed due to a change of shift [peresmenka]. It is good that the personnel of the floating crane helped the crew, otherwise the layover time threatened to be prolonged.

It would be desirable if the combined forces of seamen, operators, longshoremen, and all interested specialists cared for the general interests of the state. Then there would not be so many large miscalculations in the operations of the KhEGS.

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CSO: 1829/228

OCEAN AND RIVER

BRIEFS

SURPLUS PERSONNEL CRITICIZED—The USSR Ministry of Fish Industry has reviewed the issues raised in D. Spitsyn'sletter published in SOTSIALISTICHESKAYA INDUSTRIYA on 29 June 1980 under the title "Doing Nothing." Deputy USSR Minister of Fish Industry Yu. Bystrov reports the following. The seiner-trawler Sargan, design No 503 built in 1978, is designed to catch fish by trawl gear, purse seine, and by liftnet using electric light, and to produce refrigerated and freshly salted fish products. The ship has two ice generators, a ship refrigeration plant, and four supporting compressors to produce ice. In view of this equipment and its purpose, the operations crew personnel schedule includes the position of refrigeration mechanic. The refrigeration unit is used in production on all ships of this type and the mechanic performs his regular duties to keep this unit operating properly. During our review of D. Spitsyn's letter it was learned that there have been cases in the Far Eastern basin where such ships have been assigned to catch fish and deliver them in fresh form to a mother ship for processing. In these cases the refrigeration unit was not in operation and the mechanic did nothing but keep it in proper technical condition for periodic use of the ice generators. In addition he serviced the air conditioners in the living quarters of the ship and the refrigerators in the provisions compartment, while doing other jobs as instructed by the ship's captain. The USSR Ministry of Fish Industry acknowledges that the issues raised by D. Spitsyn in the article "Doing Nothing" are very timely and correct. For this reason we have prepared an order for the all-Union fishing associations which have fishing fleets to exclude the refrigeration unit mechanic from the crew when ships are being sent out to fish and will not use their refrigeration equipment. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 24 Sep 80 p 2] 11176

NEW KAMCHATKA AIR ROUTE—The oblast center of Kamchatka has established an air connection with Bering Island in the Pacific Ocean. The first passenger flight was made by an L-410 plane. The pilot will fly this route twice a week. [Text] [Moscow PRAVDA in Russian 21 Jan 81 p 1] 11176

SHIPPING TO AFGHANISTAN—Termez—The Amu-Dar'ya river transportation workers have completed their first trips abroad with caravans of ships carrying planting machinery. The peasants of Afghanistan will receive plows, harrows, planters, and tractors as well as machinery to gather the future harvest—mowers, reapers, and combines. Large batches of select seeds are also being sent to the organizations carrying on the land reform in our neighboring, friendly republic. The Russian Federation is sending high-yielding Saratovskaya wheat grain, while Uzbekistan is sending seeds of the best cotton varieties and Kirghizia is sending sugar beets. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 12 Feb 81 p 1] 11176

LENINGRAD DEEP-WATER DOCKS—Leningrad—The captains of dry-cargo ships arriving in the commercial seaport of Leningrad have received orders to change the usual route in the waters of the Neva harbor. These are the first ships to tie up at the deep-water dock complex. The launching of this "open-air shop" has eliminated the need to unload large motorships, which formerly could not tie up at the docks because of the shallow water, in the roadstead. [Text] [Moscow IZVESTIYA in Russian 4 Nov 80 p 3] 11176

NEW TRANSPORT DELIVERED—The shipbuilders at the Leningrad Shipyard imeni A. A. Zhdanov have turned over the ro-ro transport ship Mar'yan [Marjan] to Yugoslav seamen. The motorship can carry 600 motor vehicles or 300 international standard containers. Such ro-ro ships are in great demand. The Soviet enterprise has begun series production of them. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 11 Nov 80 p 1] 11176

NEW RIVER-SEA BARGES—Kerch'—The new river-sea class barges which have gone into series production at the Zaliv Shipyard imeni B. Ye. Butoma in Kerch' will help extend the shipping season on Siberian rivers. The first barge was launched two months ahead of schedule. The barges are designed chiefly to serve the petroleum extraction regions, and their use will significantly reduce the transshipment of cargo from river transportation to sea-going vessels. A large batch of these barges will be sent to Omsk this year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 14 Jan 81 p 1] 11176

NEW CASPIAN TRAWLERS—Klaypeda, 3 Jan 81—The Baltiya Shipyard has laid the keel of the pilot Moryana class trawler which will be the principal output of Lithuanian shipbuilders in the present five-year plan. The ship, whose design was developed by specialists at the Leningrad Vostok Special Design Bureau, is to be used to catch sprat in the Caspian Sea. During the 10th Five-Year Plan labor productivity at the shipyard rose 25 percent and more than 90 percent of their output received the state Mark of Quality. The collective has continued its work to raise labor productivity in the first days of the new year. [Text] [Moscow PRAVDA in Russian 4 Jan 81 p 1] 11176

FAR EASTERN PORT CONSTRUCTION—Vladivostok—Another harbor has appeared on the map of the Far East. The first complex of the fishing port in Troits Bay, which was named more than 100 years ago by the seamen of the famous frigate Pallada, has been turned over for operation. This is the seventh port in the Gulf of Peter the Great, on whose shores Vladivostok, Nakhodka, and Vostochnyy Port are also located. This is where the Transsiberian Railroad connects to the sea, and it is the base of two steamship lines and the flotillas of the Dal'ryba [Far Eastern Fishing] Association (which now produces more than 40 percent of the all-Union fish catch). The new port has a branch rail connection to the Transsiberian road. When it goes into operation it will be possible to transship the growing flow of fish coming from the Pacific Ocean. The docks in Troits Bay are equipped with modern, highly productive machinery and can unload several refrigerator transport ships at one time. During the 11th Five-Year Plan the length of the docks will surpass 500 meters. A heavy-duty refrigerator unit will be built, as well as living quarters. [Text] [Moscow IZVESTIYA in Russian 4 Jan 81 p 1] 11176

ICEBREAKING FERRY BUILT—The Riga Ship Repair Yard has completed construction of the Primorets, an icebreaking ferry that will operate on Far Eastern crossings connecting Vladivostok with fishing communities. The ferry can take on 160 passengers and more than 40 cars. [Text] [Moscow IZVESTIYA in Russian 4 Jan 81 p 6] 11176

PAVLODAR SLIPWAY BUILT—A new slipway with powerful hoisting mechanisms has been turned over for operation at the Pavlodar Shipbuilding and Ship Repair Yard. Up to 10 vessels of varying displacement in need of capital, current, and preventive repair can be located on the slipway at one time. In the past Pavlodar river workers were forced to send up to 100 ships and barges to the slipways at Semipalatinsk for repair. But now all the vessels assigned to the yard will go through all types of repair on the spot. The new slipway will also be used for the construction and assembly of new ships, whose production is growing each year at the yard. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 14 Oct 80 p 2] 11176

BLACK SEA RAILROAD FERRY—Varna—"The railroad ferry crossing from Il'ichevsk to Varna opened two years ago, in November of 1978," says Vitaliy Stepanovich Treguba, shift captain of the ferry. "The route is served by two Soviet ships, the Geroi Shipki and Geroi Plevny and two Bulgarian ships, the Geroi Odessy and Geroi Sevastopolya. In the past two years more than 4.4 million tons of cargo has been carried on this maritime railroad crossing, which has become a 'bridge of friendship.' Last year we delivered 86 railrod cars in one run, and this year it is 98." [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Dec 80 p 3] 11176

NEW RESEARCH SHIP—The fleet of Soviet scientific research ships has been augmented by a new research vessel, the Akademik Mstislav Keldysh. It was built at the Finnish Holming Shipyard and is named in honor of the outstanding Soviet scientist and former president of the USSR Academy of Sciences Academician M. V. Keldysh. The modern and comfortable ship has a displacement of 5,500 tons and is designed for hydrophysical research. The outward appearance of the ship is unusual. All its superstructures are moved to one side. The open part of the deck is left entirely for conducting work overboard. On this side are powerful winches, special underwater equipment, and various other research devices. One other outstanding feature of the new ship is that it can move both forward and backward, and left or right perpendicular to its sides. The ship will make its first cruise to the Caribbean Sea region, carrying biologists, geologists, and geophysicists. Their work there will be conducted according to a multifaceted research program. [Text] [Leningrad LENINGRADSKAYA PRAVDA in Russian 16 Feb 81 p 1] 11176

DEVELOPMENT OF ARCTIC TRANSPORT—The growth in shipping for the national economy in the northern latitudes (it will increase even more in the 11th Five-Year Plan in connection with continued development of the European North, Siberia, and the Far East) demands the construction of a new type of

Arctic ship which has all the strongpoints of Arktika class atomic ships, and one more capability—the ability to carry cargo. Work on the development of such a ship is already underway in the country. It will be a lighter-container carrier. During loading the vessel will take on board dozens of large lighters, rectangular barges. In the mouths of rivers the ship crane will set them on the water and the lighter carrier, without delay, will travel on. Tugs will form the lighters into caravans which will then travel up river to their destinations. The mother ship will collect them up again on its return trip. Its greater icebreaking class and 40,000-horsepower power plant will enable the lighter-container carrier to break fairly thick ice on its own. The Arctic has never seen such a powerful transport vessel. Its displacement is 61,200 tons. [Text] [Moscow KRASNAYA ZVEZDA in Russian 1 Feb 81 p 4] 11176

NEW SUPERTRAWLER—Nikolayev—The ship which stands by the wharf wall of the Black Sea shipyard can be seen from far away. The words "26th CPSU Congress" stand out clearly on its side. This is the name the Nikolayev shipbuilders have given to the new supertrawler. The collective of the yard joined the pre-Congress competition with a promise to turn the ship over for operations on 23 February, 35 days ahead of schedule. They are keeping their word. The ship was put in the water early, final construction touches are practically completed, and dockside tests are underway. On the day that the congress opens the supertrawler will be turned over to a crew of the Kamchatrybprom [Kamchatka Fish Industry] Production Association in a formal ceremony. It will then set its course for the Far East. [Excerpts] [Moscow EKONOMICHESKAYA GAZETA in Russian No 6, Feb 81 p 4] 11176

DRY-CARGO SHIPS BUILT—The merchant fleet of our country has received a new series of general-purpose dry-cargo ships. The final ship of this type with a cargo capacity of almost 14,000 tons has been launched at the Kherson Shipyard. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 48, Nov 80 p 2] 11176

ICEBREAKER UNDER CONSTRUCTION—The keel of a new icebreaker designed for work in the coastal regions of the northeastern part of the country has been laid at the slipway of the Admiralty Association in Leningrad. The shipbuilders have obligated themselves to complete formation of the ship's hull by the 26th CPSU Congress. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 48 , Nov 80 p 2] 11176

NEW TRIUMPH SPEEDBOAT—The Leningrad Experimental Sport Boat Building Plant is manufacturing the Triumph trimaran speedboat. The boat is designed for towing water skiers, for practice and competition in water sports, for rescue work, excursions, and water tourism. The boat has a fiberglass hull, trimaran lines, and an enclosed motor compartment. The Triumph is designed for five persons with cushioned seats and a windshield. It has heightened stability and does not need annual repair. The boat is 5.3 meters long, two meters wide, and 0.9 meters high. It has a 115-horsepower motor and can travel 55 kilometers an hour. The boat's price is 7,200 rubles. It will be sold to enterprises and organizations. Delivery will be made by rail or motor vehicle transportation. Orders should be sent to the manufacturer's address: 195272 Leningrad, Utkin Prospekt, 15. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 48, Nov 80, p 19] 11176

NEW SHIP FOR ARCTIC -- GDR -- At the "Varnov-Verft" shipyard in Varnemyunde, the first ship of a new series is being built to Soviet order. The seagoing ship is for transporting cargoes in the severe conditions of the Arctic. It will have a special crane allowing the crew to accomplish loading and unloading without help from the outside. [Text] [Baku VYSHKA in Russian 21 Mar 81 p 4] 9136

EARLY CANAL OPENING -- Volgograd -- Navigation on the Volga-Don canal imeni V. I. Lenin was opened 10 days ahead of schedule. [Text] [Moscow IZVESTIYA in Russian 15 Mar 81 p 6] 9136

ARCTIC TRAVEL--Arctic navigation is continuing on the Northern Sea route. The seamen are having to work in severe weather conditions. Thick pack ice is still in place there. Temperatures are below zero and storm-force winds are raging. The atomic icebreakers Arktika and Sibir are escorting another convoy which consists of the ore carriers Admiral Ushakov and Yuriy Dolgorukiy as well as the tanker Smaburg. The Kara Sea, the most difficult section of the route, has now been crossed. The voyage of the convoy, which is heading for Dudinka, is exactly on schedule. [Text] [LD080130 Moscow Domestic Service in Russian 2100 GMT 2 Apr 81]

BALTIC SHIPPING--Winter navigation continued here in Leningrad. Although spring has already begun, up to now the situation in the northern section of the Baltic has remained difficult for shipping. The current season has been very difficult for sailors. Severe frosts covered all of the Gulf of Finland. And even at the approaches to Tallinn, icebarriers formed. Guiding shipping is undertaken by the largest ships in the flotilla of the ice-strengthened class headed by the powerful icebreakers Krasin and Murmansk which have come from the polar area to the Gulf of Finland. Also here are the Baltic icebreakers Kapitan Izmaylov, Ivan Kruzenshtern, and Semen Dezbnev. Special tugs are operating in all ports of the basin. The sailors are helped by detachments of the hydrometeoreological service and aircraft engaged in ice reconnaissance work. Over 1,000 Soviet and foreign vessels were guided into and taken out of Leningrad and Vyborg during the navigation season. [LD080130 Moscow Domestic Service in Russian 2100 GMT 5 Apr 81]

NEW ICEBREAKER--Polar seamen are preparing for this year's first trip to Yamal. Vessels from Murmansk and Archangel will meet the atomic-powered ships Arktika and Sibir at the edge of the ice where the Barents and Kara Seas meet. They will be conducted further east to Kharasavey, where the recovery of natural fuel is being developed. Thanks to the icebreaking fleet, there is practically nonstop sea traffic in the Arctic. The fleet will soon get another atomic-powered vessel--the Rossiya, under construction in Leningrad. [Moscow Domestic Service in Russian 0700 GMT 5 Apr 81]

AUTOMATED SYSTEMS AND STEAMSHIP LINE--An automated control system is now being used by the Primorskoye Maritime Steamship Line. The line's information and computer center keeps track of vessel activity, and approximately 30 complexes are involved. According to the chief of the information and computer center, the automated control system tracks the technical aspects of fleet planning and regulates ship repairs and fuel consumption. It also has a large accounting and statistical complex. Some of the latest types of machines are used at the center, including the 10-22 third generation machine. [SK080200 Vladivostok Domestic Service in Russian 0830 GMT 7 Apr 81]

NEW ICEBREAKER OPERATIONAL -- Murmansk -- The new Soviet icebreaker "Kapitan Dranitsyn" has taken into a convoy a caravan of ships with cargoes for Noril'sk. The ship, built in Finland, entered into the icebreaker fleet of the Murmansk maritime shipping company on the eve of the new year. In the near future, Arctic seamen will receive several new ore carriers of a class strengthened for navigation in ice. [Text] [Moscow IZVESTIYA in Russian 27 Jan 81 p 2] 9136

NEW PORT FACILITY -- In our republic it is planned to continue the development of maritime ports. A new section of the port of Riga will be built on Kundzin'sala island. It is projected to reduce by a month the period for full mastery of the mechanized system for processing potassium salts in the Ventspils commercial port. In the first quarter of 1981 the specialized container terminal in the port of Riga will come into use. [Excerpts] [Riga SOVETSKAYA LATVIYA in Russian 21 Jan 81 p 2] 9136

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